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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,981	11/20/2003	Taison Tan	Q175-USI	2730
31815	7590	08/03/2007	EXAMINER	
MARY ELIZABETH BUSH			HODGE, ROBERT W	
QUALLION LLC				
P.O. BOX 923127			ART UNIT	PAPER NUMBER
SYLMAR, CA 91392-3127			1745	
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			08/03/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/718,981

Applicant(s)

TAN ET AL.

Examiner

Robert Hodge

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1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-47 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 June 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments, see Remarks, filed 6/14/07, with respect to the objections to the drawings have been fully considered and are persuasive. The objections to the drawings have been withdrawn.

Applicant's arguments filed 6/14/07 have been fully considered but they are not persuasive. With regards to Munshi in view of Yamada applicants argue that the references teach two different types of batteries and therefore it would not be obvious to combine the teachings of the two references. This is not persuasive for at least the reason that both Munshi and Yamada teach batteries involving lithium chemistry, therefore because the chemistry is the same it is the Examiner position that a person having ordinary skill in the art would in fact be motivated to combine the teachings of the two references as has been suggested in the Non-Final Office action dated 3/13/07. Applicants state that they cannot find a reference to Lithium Foil in the Yamada reference. Said limitation can be found in paragraph [0048] of the reference, which was provided to applicants in the grounds of rejection in the Non-Final Office action dated 3/13/07.

With regards to claims 2, 3, 10, 20, 22 and 26 applicants state that the claims do not recite intended use but in fact recite positive structure. Applicants do not argue that the supposed implied structure is not present in the prior art, only that there are no intended use statements. However as seen in claim 2, "during discharge...", in claim 3, "active material decreases...", in claim 10 "can be generated...", in claim 20 "to be

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depleted", in claim 22 "can be generated...", and in claim 26 "before discharge of..." all start recitations of intended use. Applicants are reminded that the claims are product claims and therefore only the final product of the claims can be examined. Said recitations are recitations of how the battery is being operated and how the chemistry changes during operation and is not the final product and therefore said recitations are not given patentable weight for examination purposes. Furthermore it is quite clear that the layered structure of Munshi as modified by Yamada reads on the implied structure of the claims and therefore the rejections will be maintained.

With regards to claim 17, 18, 32, 33, 34, 38-44, 46 and 47 applicants state that the chemistry of claim 1 and therefore cannot make inherency statements. However as clarified above it is quite clear to the Examiner that the chemistry of claim 1 has been found in the prior art and therefore the recitations in the above listed claims of "voltage discharge profiles" having specific slopes is in fact a property of the battery and therefore it is maintained that because it is a measured property of the chemistry of the battery it is inherently found in the battery of Munshi as modified by Yamada.

With regards to the Double Patenting, a double patenting rejection is a comparison of the claims, however if the instantly claimed invention would have been an obvious modification of a previously claimed invention as shown by another prior art reference then double patenting is still proper. This has been shown to applicants and will therefore be maintained.

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pre-grant Publication No. 2003/0211383 hereinafter Munshi in view of U.S. Pre-Grant Publication No. 2002/0004169 hereinafter Yamada.

Munshi teaches a primary lithium battery comprising a lithium or lithium alloy anode such as a lithium-silicon alloy, a cathode comprising a fluorinated carbon (i.e.  $CF_x$ ) and a non-aqueous electrolyte comprising lithium bis(oxalate)borate (see paragraphs [0014], [0020], [0024], [0025] and [0028]).

Munshi does not teach an anode having two layers of active material.

Yamada teaches a non-aqueous electrolyte lithium battery wherein the anode can comprise a layer of  $LiSiO$  and a layer of lithium or lithium foil provided over the layer of  $LiSiO$  (abstract and paragraphs [0046]-[0048]).

At the time of the invention it would have been obvious to one having ordinary skill in the art to include a layered anode structure in Munshi as taught by Yamada in order to provide a lithium primary battery that has improved discharging characteristics that will prevent deterioration during discharging of the battery thus improving the overall performance of the battery.

The Examiner notes that claims 2, 3, 10, 20, 22, 26 and 29 contain statements of intended use. Because the chemistry of the instant invention has been found it is the Examiner's position that the battery of Munshi as modified by Yamada is capable of the

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intended use of the instant invention and therefore reads on the claims as so recited.

The Examiner further notes that claims 17, 18, 32, 33, 34, 38-44, 46 and 47 all recite measured properties of the battery of the instant invention. Again because the chemistry of the instant invention has been found it is the Examiner's position that the battery of Munshi as modified by Yamada has the same properties as recited in the claims. A reference, which is silent about a claimed invention's features, is inherently anticipatory if the missing feature *is necessarily present in that which is described in the reference*. In re Robertson, 49 USPQ2d 1949 (1999).

Furthermore Munshi as modified by Yamada discloses the claimed invention except for the measured properties of the battery. It would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize the discharge properties, since it has been held that discovering an optimum value of a result effective variable in the absence of unexpected results, involves only routine skill in the art. In re Boesch, 617 E.2d 272, 205 USPQ 215 (CCPA 1980).

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422

F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-47 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3, 5, 7, 8, 13-17, 20-22, 24 and 27 of copending Application No. 10/719,276 in view of Yamada. The only difference between the present invention and copending Application No. 10/719,276 is the use of two layers of active material in the present invention. Yamada teaches a two-layered anode as discussed above, which would be obvious to include in copending Application No. 10/719,276.

This is a provisional obviousness-type double patenting rejection.

### **Conclusion**

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Hodge whose telephone number is (571) 272-2097. The examiner can normally be reached on 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RWH

  
JONATHAN CREPEAU  
PRIMARY EXAMINER